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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,999	12/29/2000	Ali Najib Saleh	CIS0008C1US	8353

33031 7590 02/27/2007

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EXAMINER	
NGUYEN, HANH N	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/751,999	SALEH ET AL.	
	Examiner	Art Unit	
	Hanh Nguyen	2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 11/13/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 38-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218.

DETAILED ACTION

Response to Amendment

Amendment filed on 11/13/06 has been entered.

The 112 2nd paragraph against claim 177 is maintained.

Claims 58-65 have been examined and are rejected under 102(e) as being anticipated by Allen et al.

Claims 40-52 have been addressed in claim 38 such as link cost field (hop count field); request field (inherently included in PACK message); initialization packet (col.5, lines 53-57), negative response field (inherently included in the reserve bandwith if not having enough bandwidth) etc,..

Refer to claim 38, Applicant argues on page 40 of the Remark that Allen et al. does not disclose the protocol packet is configured to record a protocol packet path from the origin node to the target node.

The claimed invention does not require how the protocol packet is configured to functionally record a protocol packet path. Examiner agrees with Applicant's assertion addressing that Allen et al. discloses that a tandem node records hopcount, upstream node Id and bandwidth (step 710, fig.7) if the hopcount field in the pack message is less than a hopcount limit. The pack message is discarded if its hopcount is greater than the hopcount limit (step 706, fig.7). However, since the claimed limitation only requires in general that "the protocol packet is configured to record a protocol packet path from the origin node to the target node"; and does not require how the step of recording packet path is performed.

Further as the following tandem nodes receive and copy the pack message (see steps 714, 716, fig.7), eventually, the pack message will arrive at the destination node carrying a record of the packet path from the source node to the destination node.

Regarding claim 111, applicant argues that Fukushima et al. does not disclose said at least one node identifies a node in a network for which said sending node seeks link state advertisement. Examiner does agrees because Fukushima et al. discloses, in ***col.2, lines 15-20; checings if each of routers has received network link state information and in col.2, lines 27-32, " if there is any other router from which the router has not received hello packet for longer than a fixed period, the router decides that a failure has occurred in this other router".***

Claims 163, 177, 191 and 205 are mood in view of new art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 163, 177, 191, 205 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Rergarding to 112 2nd paragraph in claims 163, 177, 191, 205, examiner does not agree with applicant 's response because "said processor receiving a hello packet **at** a downstream node" is followed by the step of " sending an acknowledgement **to** said downstream node" is not defined because it is not clear "what element sends an acknowledgement to said downstream node" and "The downstream node can not receive a hello packet at send an acknowledgement to it self" which is the downstream node. However, it would have made sense for "said processor

to receive a hello packet **at** a downstream node" and " sending an acknowledgement **from** said downstream node".

Claims 179-190 are rejected because they depend on claim 177.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 38-52, 58-65 are rejected under 35 USC 102(e) as being anticipated by Allen et al. (US pat. 5,748,611).

In claim 38, Note that the protocol packet in the claimed invention is used to transmit from an origin node via neighbor nodes in order to find a target node. Examiner uses the PACK message in Allen et al. as the protocol packet because the PACK message (see col.6, lines 25-45) is a forward restoration message transmitted along each of the source A 's spans to tandem nodes which rebroadcast the PACK message to destination node; see fig.5 and 6).

In particular, Allen et al. discloses a networking protocol for a network comprising: a protocol packet sent from an origin node to neighbors of the origin nodes to find the target node (see fig.5 & 6, steps 504, 506, 508; col.6, lines 25-55; PACK messages are transmitted from a source node to tandem nodes which rebroadcast the PACK messages until a destination node receives it); the protocol packet is configured to record a protocol packet path from the origin node to the target node (see col.6, lines 37-42; each PACK message includes a hopcount field which is incremented as the PACK message traverses the network to reflect the number of spans traversed; see further at col.7, lines 25-50); the protocol packet comprises information regarding a topology of at least a portion of said network (see fig.7, the number of hopcount fields increase while the PACK message traverses the network shown in steps 702, 710, 712, 714, 716 represent the remain topology of network beside the failed link).

In claim 39, Allen et al. discloses protoco packet comprises header data (address of source and destination node in the PACK message) and command-specific data (PACK message comprises restoration request). See Abstract.

In claims 40-52, the limitations of theses claims have been address in claim 38.

In claim 58, Allen et al. discloses protocol packet is restore path packet (see fig.3, step 306; col.5, lines 47-53 or pack message at fig.5, steps 504).

In claim 59, Allen et al. discloses a virtual path ID field (see col.6, lines 7-15; path ID).

In claim 60, Allen et al. discloses a path length field / link cost field (hop count field reflects the number of spans traversed by the Pack message; see col.6, lines 37-42).

In claim 62, Allen et al. discloses protocol packet is a create path packet (see col.5, lines 53-57; fig.3, step 308; creating a restoration path).

In claim 61, Allen et al. discloses path array (fig.11 shows spans SE, AE, EC ED, each having respective spare links). See col.8, lines 55-60.

In claims 63 and 65, the limitations of this claim have been addressed in claims 59, 60 and 61.

In claim 64, Allen et al. discloses a delete path packet (see fig.3, step 312; releasing network resource that were allocated to the restoration of disrupted path; see further in abstract; last 3 lines in clean up phase).

Claims 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205 and 207-218 are rejected under 35 USC 102(e) as being anticipated by Fukushima et al. (Pat. 6,490,246 B2).

In claims 111, 124, 137, 150, Fukushima et al. discloses, a method of processing a get link state advertisement packet comprising receiving the get link state advertisement packet (fig.8, step 121, receiving a Hello packet/ routing protocol packet) at a downstream node (at routers 30; col.11, lines 55-60; fig.1), wherein the get link state advertisement packet (the Hello packet) is sent by a sending node (from router calculating unit 11; fig.2), the get link state advertisement packet comprises at least one node identifier (see col.1, lines 45-50; the hello packet comprises a list of other routers'Ids in the same network); said at least node Id (each router) identifies a node in the network for which the sending node seeks link state advertisement (see col.2, lines 15-20; checks if each of routers has received network link state information and in col.2, lines 27-32, " if there is any other router from which the router has not received hello packet for longer than a fixed period, the router decides that a failure has occurred in this other router"). The downstream node and said sending node are nodes in the network (the two routers

are connected to the same network); sending at least one link state advertisement from the down stream node to the sending node (fig.8, steps 122, 124 and fig.9. steps 131, 133; network link state information received from neighbor node); and sending an acknowledgement of the at least one link state advertsement to the downstream node (fig.9, step 135 and fig,10, step 143, sending update information).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 163, 177, 191, 205 are rejected under 35 USC 103(a) as being unpatentable over Fukushima et al. (Pat. 6,490,246 B2) in view of Dobbins et al. (US pat. 5,825,772).

In claims 163, 177, 191 and 205, Fukushima et al. discloses receiving a hello packet at a downstream node, wherein said hello packet comprises a link state advertisement (see col.2, lines 10-14; each router receives hello packets and and network link state information); processing said link state advertisement (see col.2, lines 15-20; manage states of other routers in the network and check if each of those routers has received network link state information), wherein processing said link state advertisement includes sending the link state advertisement from the downstream node (checking each of routers mentioned above inherently comprising sending link states from the router through other routers in the network). Fukushima et al. does not disclose sending an acknowledgement to said downstream node, wherein said acknowledgement

acknowledges all link state advertisements in said hello packet. Dobbins et al. discloses, a poll-response procedure wherein slave switch acknowledges database description packets (hello packet) sent by the master switch. The database description packet comprises link state advertisement (see col.13, line 65 to col.14, line 5 & lines 17-35). Dobbin further discloses flood advertisements are acknowledged in link state acknowledgement packets (see col.14, lines 47-63). Therefore, it would have been obvious to one ordinary skilled in the art to apply the link states topology exchange taught by Dobbin with Fukushima determine current network topology, current link, node states,

Claims 113-123, 152-162, 165-176 and 207-218 are rejected because they depend on their parent claims.

Claims 126-136, 139-149, 179-190 and 193-204 are rejected under 35 USC 103(a) as being unpatentable over Fukushima et al. (Pat. 6,490,246 B2).

Claims 126-136, 139-149, 179-190 and 193-204 are rejected because they depend on their parent claims 124, 137, 177 and 191 respectively.

Claims 53-57, 66-70 are rejected under 35 USC 103(a) as being unpatentable over Allen et al. (US pat. 5,748,611) in view of Fukushima et al. (Pat. 6,490,246 B2), and further in view of Dobbins et al. (US Pat. 5,825,772).

In claims 53-57, Allen discloses the pack message comprise hop count filed, but does not that the protocol packet is a hello packet, test packet, get link state advertisement packet comprising link state advertisement field, neighbor field. Fukushima et al. discloses the protocol packet is a hello packet (see fig.8, see col.10, lines 20-22; routing protocol packet is hello

packet). Dobbin discloses advertisement requested is specified by link state ID (link state advertisement field) and list of names and costs to each of its neighbors (neighbor field). See col.14, lines 17-20 and lines 50-53). Therefore, it would have been obvious to one skilled in the art to have hop count field, link state advertisement, neighbor field, link state ID in the pack message of Allent et al. in order to determine current network topology and control failed connection in the network.

In claims 69 and 70, Allen does not discloses protocol packet is a link down packet. The office notice notice is taken that it is well-known skill in the art that when a link or a router is down, a protocol packet such as a link down packet is transmitted to the sender router to notify that the router has been down. For the configured packet, Fukushima discloses, in col.2, lines 25-35, that if a router has not received hello packet from other routers for longer than a fixed period, the router updates the contents of routing table and establishes another path to avoid the faulty router (protocol packet is a configure packet). Therefore, it would have been obvious that the protocol packet can be a link down packet to notify that a router has failed or a configured packet when the router establishes an alternate path.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Perlman et al. (Pat. 5,128,926);

Mahany et al. (Pat.6,374,311 B1);

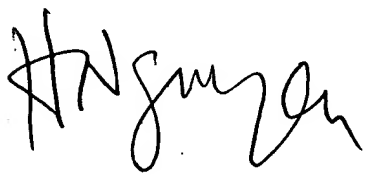
Young (US pat. 5612,950).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Thursday from 8:30AM to 4:30PM. The examiner can also be reached on alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Field , can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen



HANH NGUYEN
PRIMARY EXAMINER